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**ABSTRACT OF THE DISCLOSURE**

**GPS-BASED TRAFFIC CONTROL PREEMPTION SYSTEM**

5     A traffic control preemption system uses data received from a global  
positioning system (GPS) to determine whether a vehicle issuing a preemption  
request is within an allowed approach of an intersection. GPS signals are received  
and processed by the vehicle module to generate vehicle data, including the  
vehicle's position, heading and velocity. The vehicle data is transmitted via radio  
transmission or some other medium. Each intersection has an associated  
10    intersection module which, if within range of the vehicle's transmitting equipment,  
compares the received vehicle data with a preprogrammed map of allowed  
approaches to the intersection. If the vehicle data sufficiently matches the map of  
allowed approaches, the vehicle's preemption request is forwarded to the  
intersection controller to appropriately control the phase of the traffic signal at the  
15    intersection.